

of the Secretary of State, the Chief Commissioner of the Woods and Forests, of the President of the Royal Academy, of the Royal Institute of British Architects, and Society of Antiquaries, together with such other intelligent and experienced architects, painters, sculptors, and antiquaries as the Sovereign may consider well versed and learned in the history, arts, and antiquities of the country.

That no restoration of any monument be commenced until drawings have been made of its actual state, casts taken of the portions connected with those parts intended to be restored, and detailed illustrations have been prepared of the monument, as proposed to be repaired or renewed.

That no work be proceeded with until all the drawings for the restoration have been approved by the commissioners, and have received the assent of the Crown by the sign manual.

That no departure be hazarded from the authentic and historic authority of the precious original.

That as regards the effigies of the Royal deceased, no feature be renewed from fancy, but only restored on the authority of the most unquestionable existing likenesses of the individual personage.

That limbs or the extremities or minor parts may be restored, due regard being had to the character of the rest of the statue.

That architectural details may be restored from existing remains on the same monument, or from like parts, or other similar works of the same period.

That no entire renovation of a feature of the countenance of the effigy or part of the architecture should take place, for which there is no authority in the same monument, unless there be an authentic description or other memorial of the ancient times relating thereto.

That no restoration should vary from the parts still extant, either for the sake of greater (presumed) correctness of arrangement, or more (supposed) purity of design or detail.

That none of the work should be designed, directed, or executed, except by those who are men of established reputation, who have already done like works, and are thoroughly acquainted with the character and period of the monument to be restored.

With such safeguards, we surely guarantee the identity of these Royal and National monuments with their original conception. I would not, I dare not, ask for perfect renovation. I claim only decent repair; and that we may cast from ourselves the reproach to which we have too long been liable, from the wanton and wilful neglect—I may say destruction—of this sacred inheritance, whose actual state is dishonouring to the nation and to the times in which we live.

T. L. DONALDSON.

At a meeting of the Institute of Architects, on the 22nd inst. the consideration of this subject was renewed, and it was ultimately resolved unanimously. "That the Council be requested to draw up a humble address, to be presented to the Queen, praying that her Majesty will be pleased to appoint a commission, for the purpose of taking into consideration the dilapidated condition of the Royal tombs in Westminster Abbey, with a view to the adoption of such measures as may be proper for the preservation and perpetuation of these important national monuments; and that the seal of the Institute be fixed thereto."

THE NEW DOCKS AT GREAT GRIMSBY, LINCOLNSHIRE.

GRIMSBY, situated near the mouth of the Humber, on its south bank, was from a very early date a port of great consideration, being even in the time of Edward III. of sufficient importance to be called upon to furnish that monarch with eleven vessels and 170 mariners for his armament against Calais. The gradual blocking up of the harbour by the accumulation of mud and sand led to the decay of the port until it was renovated by the exertions of some of the neighbouring landed proprietors about the beginning of the present century, who, impressed with its applicability from its sheltered position, being protected from the storms of the German Ocean by the Spurn Point promontory, and having a fine roadstead, affording a safe and convenient anchorage for ships at all times, besides its good natural harbour, desired to restore it to its former consequence, and establish there an emporium for a large export and import trade with the Baltic and other parts of Northern Europe. A dock was constructed, extending

inland about a mile southward from the sea, a canal being cut through the foreshore to the entrance; but this, from the local peculiarities of the Humber, and the deposit brought down by its waters, was liable to be silted up, so that at certain times of the tide access to this dock was almost impossible, and at all times it was found to be very inconvenient, especially for larger vessels. This was the state of things previous to the commencement of the present works, and for a long time the trade of Grimsby had been on the decline, partly from the causes before mentioned, but principally from the fact, that it had not, at so early a period as other places, the advantages of improved means of inland transit. When, however, railway communication began to be extended into Lincolnshire, when Grimsby was put in connection with London, and the southern and south-eastern counties generally, by means of the Great Northern and East Lincolnshire Railways, when it was linked with the vast manufacturing districts of Lancashire and Yorkshire by means of the Manchester, Sheffield, and Lincolnshire Railway, no wonder that the directors of the latter company should have had their attention drawn to, and have perceived the great natural facilities and opportunities for making Grimsby a large "water terminus," as it has been aptly termed, to these railways. They purchased the old docks and works, but feeling the total inadequacy of these to carry on the trade they hoped to re-establish here, it having been temporarily drawn away by the artificial appliance offered elsewhere, they determined on carrying out the extensive works now nearly completed, which, beginning where the old works left off, at high water mark, extend for a distance of about five-eighths of a mile seaward, and inclose a space of nearly 140 acres, reclaimed from the foreshore, and over which the water of the ocean lately swept: one-third of this is reserved for the Crown. The artificial defences surrounding this enclosure consist of a wall of chalk-stone rubble, backed by a puddle bank, and faced with piles on the west side; and on the east, of an embankment of chalk stone, and a wall of the same material, separated by a puddle bank. Between these and opposite to the entrance locks, a coffer-dam, 1,500 feet in length, forming the arc of a circle, the versed sine of which is 200 feet, composed of three rows of whole timber piling, was constructed. This required to be entirely self-supporting, and as it was situated in a very exposed position, subject to a daily rise of tide of 25 feet, and frequently to violent and severe storms, it is satisfactory to record that it has most efficiently answered its purpose, and fully justified the enormous sum Sir William Cubitt once passed upon it, that "it was the longest, the strongest, the deepest, and the soundest work of the kind he had ever seen." It took in its erection above 60,000 piles, averaging from 75 to 45 feet long: it was taken too by the present contractors at the sum of 40,000*l*. It was originally intended to have had but one entrance to these docks, but Government, before giving their sanction to the scheme, acting under the advice of the Admiralty, required an undertaking that the entrance should be of sufficient size to admit of the passage of the largest steamer in the Royal Navy. The company's engineer thereupon recommended that there should be two locks, one 300 feet long by 70 feet wide, and the other 200 feet long by 45 feet wide, for ships of ordinary burthen; by which means the loss of water which would have ensued from using the larger one on all occasions was provided against. When it is considered that the basin is not tidal, but supplied by the fresh water which is gathered from the hills, &c. in the neighbourhood, to prevent that deposit of silt to which all tidal harbours are liable, the judiciousness of this recommendation will be readily admitted: this obligation on the part of the Admiralty entailed an extra outlay of about 50,000*l*. on the company.

The basin, or float, to which these locks give access, for twelve hours out of the twenty-four, to the largest war steamer, and for twenty to ships of lesser dimensions, is rather more than 25 acres in extent, bounded by three

quarters of a mile of quay, built on arches, on which eventually extensive warehouses will be constructed, a beginning having been already made by the company. On these quays railways are to be laid, so that it will be possible to load and unload from the shipping to the rail without intermediate carriage or labour. In front of the locks there will be a tidal basin of about 20 acres in extent, surrounded and protected by timber jetties within which vessels may ride in safety when they cannot enter the dock, or at which they may land passengers when they do not require to do so; the east horn being already nearly finished. All the timber intended for permanent purposes has been submitted to a preservative operation,—the injection of hot oil of tar under atmospheric exhaustion.

A very conspicuous object on the works is a lofty and graceful tower of red brick, raised to a height of 230 feet, about 30 feet square at its base: this is for the purpose of accumulating a store of water for giving motion to one of Mr. W. G. Armstrong's beautiful water-pressure machines for opening and shutting the lock gates, and to be otherwise employed in the relief of a vast amount of labour. It is the intention to raise this tower above the tank another 70 feet, to serve either as a landmark or lighthouse.

To give an idea of the amount of material consumed in this large undertaking in the docks alone, we may mention that there were used from 400,000 to 500,000 cubic feet of Ashtlar, mostly from the Anston quarry, as used at the new Parliament Houses; 250,000 cubic yards of rubble; 380,000 cubic yards of chalk; 40,000 tons of blue lias from Lyme Regis, and that there were 1,000,000 cubic yards of excavation. All this was said to be in sight, but what was out it was utterly impossible to say: the only thing kept any registry of was the timber, and under the quay walls, lock bottoms, &c. the piles, if placed end to end, would measure 75 miles, and the timber laid on the pile heads, 40 miles, in all, 115 miles of timber, 12 inches square. The total cost of the docks will be about 750,000*l*. The works were designed by Mr. James M. Rendel, president of the Institute of Civil Engineers, and have been carried out under his direction, as engineer-in-chief, by the resident, Mr. Adam Smith: they were commenced in the spring of 1846, and in the month of April, 1849, H.R.H. Prince Albert laid the first stone, a large block of "Bramley fall," weighing 11 tons, with great ceremony.

To commemorate the proximate completion of this undertaking, which it is expected will be partially opened by the middle of May for traffic, the contractors, Messrs. Hutchings, Brown, and Wright, who have been engaged upon them for the last three years, and by whom the work has been done in a very satisfactory manner, entertained the chairman and directors of the company, and a very large party of scientific—and unscientific—gentlemen, numbering about 350, under a tent, erected in the bottom of the large dock, with profuse liberality, special trains being engaged for the conveyance of their guests from London and Manchester. The visitors from London left about eight o'clock in the morning, travelled some 156 miles, spent seven hours at Great Grimsby, returned the same distance, and found themselves again at London, an hour later than they should have been but for some trifling mishap, about twelve, thanks to the Great Northern and East Lincolnshire Railways: a striking contrast to the state of things at no earlier a date than 1816, when some personal luggage sent from Grimsby by smock, the then only means of conveyance, was en route for the metropolis eight days!

We cordially wish success to Great Grimsby.

BRADSHAW'S RAILWAY GUIDE.—An improvement has been made in "Bradshaw's Sixpenny Railway Guide" for the current month. The figures in red ink on the map, annexed to the various lines, refer to the pages of the book, thus affording the traveller the means of obtaining the information requisite for his journey, and furnishing him at a single glance with the shortest route he can take.